

SPONGIVORY BY THE BRAZILIAN STARFISH *ECHINASTER BRASILIENSIS*. *Memoirs of the Queensland Museum* 44: 214. 1999:- The feeding ecology of *Echinaster brasiliensis* has been studied on a temporal gradient (January 1995 - September 1996, 11 observation periods), along a shallow-water transect parallel to the coastline (1.5-6m depth, 2000m²) at Ponta do Baleeiro (23°49.727'S - 45°25.364'W), São Sebastião Channel (São Sebastião, SP, Brazil). In total, 3025 starfish were observed, 44% of which were feeding (1337/3025). Of these, 42% (557/1337) were feeding on sponges, a significantly higher proportion than the real availability of sponges in terms of area coverage by organisms. Of the 33 sponge species recognised, the most wanted prey was *Mycale aff. americana*, representing 40% (221/557) of the total number of observed spongivory events. Other common sponge prey items were *Amphimedon* sp., *Haliclona* sp.n., *Mycale angulosa*, *Mycale microsigmatosa* and *Tedania ignis*, with ca. 5% of the spongivory events each. Semiquantitative arbitrary estimations point toward these species' high abundance in the study area. Therefore, we cannot discard the possibility of a direct link between the sponge's abundance and apparent starfish preferences. Of the 33 sponge species eaten, at least 61% (20/33) belong to genera from which species were found (literature) to possess toxins, thus raising

the question: 'What are these toxins good for?' The conspicuous habit of *Echinaster brasiliensis* suggests that it may be unpalatable to many potential predators, perhaps through the use of sequestered toxins of dietary origin. The temporal gradient studied did not reveal clear patterns, thus suggesting that inter-annual climatic oscillations may play an important role in shaping the starfish's feeding ecology. Acknowledgement of financial support: CNPq, FAPERJ, FAPESP, FUJB-UFRJ. □ *Porifera*. *spongivory, SW Atlantic, Echinaster, Mycale, feeding ecology, chemical ecology.*

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